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applied to the essential features hereinbefore set forth, and as follows in the scope of the appended claims.--

In the Claims

Please cancel Claims 2, 10, and 18 without prejudice. Add Claims 37-39.

Please amend Claims 1, 3, 5, 9, 11, 13, 16, 17, 31 and 32. Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages ix - xi).

- B2T
Sub C1
1. (Amended) An isolated human PAB II gene comprising a polymorphic GCG repeat in exon I thereof, wherein said polymorphic GCG repeat has the sequence
- ATG (GCG)_{6+n} GCA,
- with n being selected from 1 to 7 and wherein an allelic variant of said GCG repeat is indicative of a disease in a human patient.

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Sub C2
3. (Amended) The gene of claim 1, wherein n is selected from 2 to 7, and wherein said allelic variant is associated with an increased severity of the disease.

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5. (Amended) The gene of claim 1, wherein in said human patient, a first allele of said GCG repeat has an n which is equal to 1.

- B24
Sub C3
9. (Amended) A nucleic acid sequence comprising a polymorphic GCG repeat of exon I of the human PAB II gene, wherein said polymorphic GCG repeat has the sequence
- ATG (GCG)_{6+n} GCA,
- with n being selected from 1 to 7 and wherein an allelic variant of said polymorphic GCG repeat in a patient's human PAB II gene is indicative of a disease in said human patient.

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Sub C4
11. (Amended) The nucleic acid sequence of claim 9, wherein n is selected from 2 to 7, and wherein said allelic variant is associated with an increased severity of said disease.

- B26
13. (Amended) A method for the diagnosis or prognosis of oculopharyngeal muscular dystrophy (OPMD), a disease associated with protein accumulation in a cell nucleus, and/or swallowing difficulty and/or ptosis in a human patient, which comprises:
- a) obtaining a nucleic acid sample of said patient; and
 - b) determining allelic variants of a GCG repeat in exon I of the PAB II gene, said GCG repeat having the sequence
- ATG (GCG)_{6+n} GCA,
- wherein n is selected from 0 to 7, and
- whereby at least one of the two alleles of said GCG repeat has an n equal to 1 to 7, and is indicative of OPMD.

- B27
16. (Amended) The method of claim 13, wherein said first allele of said GCG repeat has an n which is equal to 1.
17. (Amended) The method of claim 16, wherein said second allele of said GCG repeat has an n selected from 2 to 7, and wherein said first allele is a modulator of the severity of the phenotype associated with said second allele.

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- 328 31. (Amended) An isolated human PAB II gene comprising a polymorphic GCG repeat in exon I thereof, wherein said repeat has the sequence $\text{ATG (GCG)}_{6+n} \text{GCA}$, wherein n is 0, and wherein said sequence is indicative of a non-disease phenotype in a human patient.
32. (Amended) The human PAB II gene of claim 31, wherein said gene is as set forth in SEQ ID NO:18.
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Please add the following new claims:

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- 329 37. An isolated PAB II nucleic acid sequence comprising a polymorphic GCG repeat having the sequence
- $\text{ATG (GCG)}_{6+n} \text{GCA}$,
- wherein n is selected from the group consisting of:
- a) $n=0$, wherein said nucleic acid sequence is associated with a non-disease phenotype; and
 - b) n is selected from 1 to 7, wherein said nucleic acid sequence is associated with a phenotype of oculopharyngeal muscular dystrophy, selected from at least one of protein accumulation in a cell nucleus, swallowing difficulty, and ptosis.
38. The isolated nucleic acid sequence of claim 37, wherein $n=0$, and wherein said sequence comprises the sequence as set forth in SEQ ID NO:18.
39. The isolated nucleic acid sequence of claim 37, wherein $n=0$, and wherein said sequence comprises the sequence as set forth in SEQ ID NO:1.
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REMARKS

Claims 2, 10, and 18 have been canceled. Claims 1, 3, 5, 9, 11, 13, 16, 17, 31 and 32 have been amended. Support for the amendments is found throughout the Specification and in